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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,282	09/26/2006	Hirotooshi Ishii	295727US0PCT	6171

22850 7590 05/05/2008  
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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LEE, SIN J

ART UNIT	PAPER NUMBER
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1795

NOTIFICATION DATE	DELIVERY MODE
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05/05/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,282	<b>Applicant(s)</b> ISHII ET AL.	
	<b>Examiner</b> Sin J. Lee	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 18-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/31/08, 9/26/06</u>  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

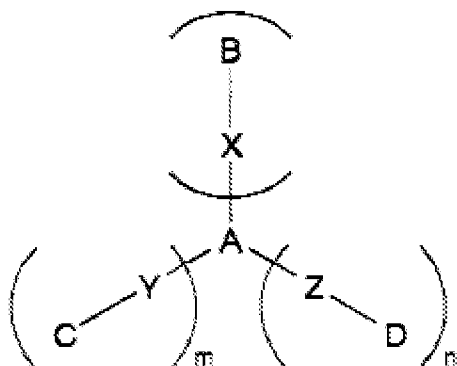
A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

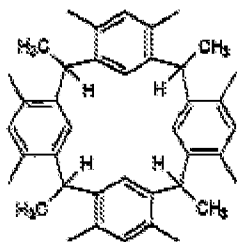
2. Claims 18-22, 28-30, 33 and 34 are rejected under 35 U.S.C. 102(a) as being anticipated by Ueda et al (WO 2004/036315 A1) (with US 2005/0271971 A1, which is an English equivalent of the Japanese document, and which is being used here for English translation for the Japanese document).

Ueda teaches (see English abstract and claims 1 and 3 of the Japanese document as well as those claims of the English equivalent) the following compound;

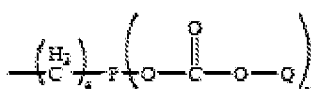


, in which A is

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and B, C and D are *H atom*, tert-butyl, tert-butyloxycarbonylmethyl, tert-butyloxycarbonyl, 1-tetrahydropyranyl, 1-tetrahydrofuranyl, 1-ethoxyethyl, 1-phenoxyethyl, or an organic group shown below;



and X, Y and Z are a single bond or an *ether bond*.

Ueda's such compound is used as photoresist base material for extreme UV radiation.

Thus, Ueda teaches present inventions of claims 18-22, 28-30, 33 and 34.

3. Claims 18-22, 33 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Haba et al ("A New Photoresist Based on Calix[4]resorcinarene Dendrimer", Chemistry of Materials, vol.11, No.2, 1999, pg.427-432).

Haba's compound (1) shown on pg.427 teaches present calixresorcinarene compound of formula (1) (present R being the last organic group shown in present claim 1) as well as present compound of formula (2) (present X, Y and Z being an ether bond, present B, C and D being phenyl group substituted with -OH groups, and present l + m + n being 8). Haba also teaches a photoresist composition containing such compound, a crosslinker and a photoacid generator (see abstract) and a lithographic method using

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such composition (see pg.431 and pg.432). Thus, Haba teaches present inventions of claims 18-22, 33 and 34.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 23-27, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al (WO 2004/036315 A1) (with US 2005/0271971 A1, which is an English equivalent of the Japanese document, and which is being used here for English translation for the Japanese document) in view of Yako et al (US 6,280,902 B1).

Ueda is discussed above in Paragraph 2. Ueda does not teach the use of a quenching agent. Yako teaches (see col.4, lines 29-37) the use of such quenching agent in order to prevent time-delay effect of a photoresist composition during PEB step. Thus, it would have been obvious to one skilled in the art to use a quenching agent in Ueda's photoresist composition in order to prevent time-delay effect of Ueda's photoresist composition during PEB step. Therefore, Ueda in view of Yako would render obvious present inventions of claims 23-27, 31 and 32.

6. Claims 23-26 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haba et al ("A New Photoresist Based on Calix[4]resorcinarene Dendrimer",

Chemistry of Materials, vol.11, No.2, 1999, pg.427-432) in view of Yako et al (US 6,280,902 B1).

Haba et al is discussed above in Paragraph 3. Haba does not teach the use of a quenching agent. Yako teaches (see col.4, lines 29-37) the use of such quenching agent in order to prevent time-delay effect of a photoresist composition during PEB step. Thus, it would have been obvious to one skilled in the art to use a quenching agent in Haba's photoresist composition in order to prevent time-delay effect of Haba's photoresist composition during PEB step. Therefore, Haba in view of Yako would render obvious present inventions of claims 23-26 and 32.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sin J. Lee/

Primary Examiner, Art Unit 1795

April 27, 2008